

### REMARKS

Claims 1 to 9 and 31 to 50 are pending in this application of which claims 1, 31 and 40 are the independent claims. Favorable reconsideration and further examination are respectfully requested.

Claim 1 was rejected as being anticipated by Cox et al. (U.S. Patent Application 2003/0103542 A1). Claims 1 to 9 were also rejected as being obvious over Bazylenko (U.S. Patent No. 6,154,582) in view of Cox. Claim 1 to 3 and 7 to 9 were further rejected as being obvious over Tran (U.S. Patent No. 6,323,480) in view of Cox. As shown above, Applicants have amended the claims to define the invention with greater clarity. In view of these clarifications, withdrawal of the art rejections is respectfully requested.

Claim 1, as amended, is directed to a waveguide. The waveguide includes a waveguide core that has a bottom surface and a top surface that defines an angle. The device also includes a cladding layer adjacent to the bottom surface. The cladding layer has a thickness equal to or greater than an evanescent tail of a mode to be transmitted along the waveguide core. The device further includes a detector layer and an attenuating layer that is coupled to the bottom surface of the waveguide core and is positioned on top of the detector layer. The mode is transmitted along the waveguide core through the attenuating layer into the detector layer.

The applied art is not understood to disclose or suggest the foregoing features of claim 1. In particular, Cox, Bazylenko and Tran, whether taken separately or in combination, do not disclose or suggest "an attenuating layer coupled to the bottom surface of the waveguide core and positioned on top of the detector layer."

Referring to FIG. 6 of Cox, Cox does not have the bottom surface of its waveguide 82 coupled to an attenuating layer. The bottom surface of waveguide 82 only contacts cladding layer 80 which is not an attenuating layer. In fact, Cox does not include an attenuating layer. Therefore, Cox does not disclose or suggest an attenuating layer that is coupled to the bottom surface of a waveguide core and that is positioned on top of a detector layer.

Referring to FIG. 5 of Bazylenko, Bazylenko does not have the bottom surface of its waveguide 14 coupled to antireflection layer 12 (Bazylenko's attenuation layer). Thus, the bottom surface of waveguide 14 never comes in contact with antireflection layer 12 or any surface other than buffer layer 13. Therefore, Bazylenko does not disclose or suggest an attenuating layer that is coupled to the bottom surface of the waveguide core and that is positioned on top of a detector layer.

Referring to FIG. 1 of Tran, Tran does not have its waveguide 26 interfacing with electrical contact layer 42 (Tran's attenuating layer). The bottom surface of waveguide 26 never comes in contact with electrical contact layer 34 or any other surface other than cladding layer 24. Therefore, Tran does not disclose or suggest an attenuating layer that is coupled to the bottom surface of the waveguide core and that is positioned on top of a detector layer.

Given the foregoing deficiencies of Cox, Bazylenko and Tran, even if these references were combined, the resultant hypothetical combination would still not disclose or suggest an attenuating layer that is coupled to the bottom surface of a waveguide core and that is positioned on top of a detector layer. For at least this reason, Applicants submit that claim 1 is allowable.

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Filed : February 26, 2002  
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Intel Docket No.: P13240

New independent claims 31 and 40 also include an attenuating layer that is coupled to the bottom surface of a waveguide core and that is positioned on top of a detector layer. These claims are therefore also believed to be allowable.

In view of the foregoing amendments and remarks, Applicants submit that the entire application is now in condition for allowance. Such action is respectfully requested at the Examiner's earliest convenience.

All correspondence should be directed to the below address. Applicants' attorney can be reached by telephone at the number shown below.

No fee is believed to be due for this Amendment; however, if any fees are due, please apply such fees to Deposit Account No. 06-1050 referencing Attorney Docket 10559-682001.

Respectfully submitted,

Date: September 25, 2003



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